

Amendments to the Specification:

Please amend numbered paragraph 0009, as shown below:

In accordance with the present invention a method and system of engine start/stop control for a HEV is provided that monitors the battery and requests a specific engine state based on the present state of the engine and a parameter of the battery. In one embodiment of the invention, the parameter is battery discharge power limit (DPL) and is computed in real-time as a function of battery state of charge (SOC), battery resistance, battery temperature, battery voltage, battery OCV, and battery life. Battery discharge power limit is the amount of power that can be used from the battery. Thus, if the battery discharge power limit is 10 kilowatts, the vehicle is allowed to use 10 kilowatts. In another embodiment, the parameter battery SOC is monitored as a proxy for battery discharge power limit on the assumption that battery discharge power limit will decrease with a decrease in battery SOC. In both embodiments the battery parameter is compared with a set of threshold levels including a MIN level, an ON level, and an OFF level and the result of the comparison provides inputs to a state machine. Preferably, different sets of threshold levels are provided depending upon whether the HEV transmission is in a drive position or a reverse position to account for the higher

battery power ~~need~~ needed to start the engine while in reverse.

Please amend numbered paragraph 0010, as shown below:

If the battery discharge power limit drops below a certain level it may be necessary to start the engine in order to charge the battery since otherwise it may not be possible to start the engine at all. However, under many circumstances it may be desirable to charge the battery, but that is not so critical as in the above example. Under these circumstances it is desirable to wait and see if the engine is started for other reasons, such as driver demand being greater than can be supplied by the battery capability. If the engine is running it may be desirable to inhibit the shutting down of the engine so that the battery can be returned to a high SOC or high discharge power limit. This "wait and see" strategy or opportunistic mode of operation is incorporated in the present invention and has the effect of reducing engine cycling thereby increasing fuel economy while ensuring that the battery will always have enough energy to spin the engine to it's desired speed when the engine is not making positive torque (such as during start-stop).